

ABSTRACT OF THE DISCLOSURE

The present invention relates to an optical element including at least; two substrates oppositely arranged; a liquid disposed between the facing surfaces of the substrates; and a chargeable polymer disposed between the facing surfaces of the substrates for swelling or contracting by absorbing or releasing the liquid when an electric field is applied, wherein

(1) an area of each adhering fixing portion is smaller than a maximum sectional area of the chargeable polymer particle at the time of maximum swelling, and

(2) a non-adhesive portion surrounds each adhering fixing portion, and the non-adhesive portion is disposed at least at a largest outer circumference of the chargeable polymer particle at the time of maximum swelling and extends inside the largest outer circumference of the chargeable polymer at the time of maximum swelling.